

REMARKS

The Present Application was submitted to the U.S. Patent and Trademark Office on 25 February 2005. The Present Application is a U.S. National Phase entry from PCT Patent Application No. PCT/US2003/0027670, which was filed with the United States Receiving Office of the Patent Cooperation Treaty (RO/US) on 02 September 2003. Further, the Present Application claims priority to Japanese Patent Application No. 2003-255358, which was filed with the Japanese Patent Office on 30 August 2002. By this Response, Independent Claim 1 remains pending in the Present Application.

In the 31 August 2009 Office Communication, the Examiner rejected Independent Claim 1 as being anticipated by *Tamura* (U.S. Patent No. 5,348,208) (*Tamura I*). Further, the Examiner rejected Dependent Claim 2 as being unpatentable over *Tamura I* in view of *Tamura* (U.S. Patent No. 5,477,463) (*Tamura II*). In the 31 August 2009 Office Communication, the Examiner indicated that *Tamura I* "does not disclose an encoder comprising light blocking and transmitting portions." 31 August 2009 Office Communication, p. 3. However, the Examiner concluded that *Tamura II* "teaches a feed detector comprising an encoder (33) having a two piece photosensor [(33c, 33d)] using a feed roller (31B) as a rotor plate. An amount of wire detected corresponds to the number of rotations of the feed roller (31B) as detected by light pulses outputted by the encoder (33) (column 6, lines 17-38)." *Id.*

In response, Applicants have amended Independent Claim 1 to more accurately describe and claim that disclosed in the Present Application, in light of the References cited by the Examiner. More specifically, Independent Claim 1 has have been amended

to reflect the further structural aspects of the supply amount detecting apparatus (29).

No new matter has been added to the Claim in the amendment presented herein.

In making this amendment, Applicants submit that the supply amount detecting apparatus of the Present Application is distinct from that disclosed in either *Tamura I* or *Tamura II*. As set forth in the Specification at pp. 11-3 of the PCT Publication, the supply amount detecting apparatus includes a slit circular disk which comprises a light blocking portion and a light transmitting portion. Additionally, the supply amount detecting apparatus includes two photosensors, each of which include a light emitting element and a light receiving element. An optical path of light is formed between each light emitting and receiving elements. When a closed portion of the slit circular disk passes between the optical paths of light, the optical path is broken. In this manner, the supply amount detecting apparatus can accurately detect the wire supply amount. However, at no time is a pulse being generated by the light emitting element.

By contrast, by Examiner admission, *Tamura I* does not disclose an encoder comprising light blocking and emitting portions. Regarding *Tamura II*, the specification states as follows:

Referring to Fig. 2, the feed detector 33 includes the feed roller 31B, a fixed plate 33b, a light emitting portion 33c, and a light receiving portion 33d for outputting pulses the number of which corresponds to the number of rotations of the feed roller 31B or the feed of the wire M. The pulses outputted from the light receiving portion 33d are applied to the position arithmetic portion 9 and the discrimination controller 12 to be described later.

Tamura II, col. 5, Ins. 16-24. Thus, the feed detector disclosed in *Tamura II* generates pulses of light, which correspond to the number of rotations of the feed roller. This acts

contrary to that described in the Present Application, which does not concern with a pulse of light corresponding to the number of rotations, but rather a steady optical path of light which is intermittently interrupted by a slit circular disk.

Therefore, Applicant respectfully submits that Independent Claim 1 of the Present Application, as amended, is not anticipated, by the combination of *Tamura I* and *Tamura II*. Rather, Applicant respectfully submits that the above-referenced combination teaches away from Independent Claim 1. Additionally, Applicant respectfully submits that Dependent Claim 2, which depends from Independent Claim 1, is allowable for the same reasons given above with respect to Independent Claim 1.

In light of the Remarks and Amendments presented herein, Applicants respectfully assert that this Response places the Present Application in condition for allowance, and request as such. Should the Examiner not agree, or have any further questions, the Examiner is requested to contact Applicants's undersigned representative.

As mentioned above, the shortened statutory period for response to the 31 August 2009 Office Communication was 30 November 2009. Accordingly, Applicants respectfully and concurrently request a Three (3) Month Extension Of Time be granted to file this Response. The associated Extension Of Time Fee may be charged to Deposit Account No. 501873.

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Respectfully submitted,

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